

REMARKS

Claims 58, 59, 64 and 65 were previously withdrawn. Claims 8, 18, 19, 32, 46, 51, 60-63, 66 and 67 were previously cancelled. Claims 2, 5, 22, 23, 36, 40-45, and 55-57 have been cancelled. Claims 1, 3, 4, 6, 7, 24-26, 29, 33, 39, 47, 49, 52, and 54 have been amended. Claims 68-74 have been added. No new matter has been added. Thus, claims 1, 3, 4, 6, 7, 9-17, 20, 21, 24-31, 33-35, 37-39, 47-50, 52-54, 58, 59, 64, 65, and 68-74 remain pending in the present application. Applicant thanks the Examiner for indicating the allowability of claims 23, 41-43, 45, 50, and 52-54 if rewritten in independent form. Applicant also thanks the Examiner for indicating the allowability of claim 44 and 49 if rewritten to overcome the 35 U.S.C. §112, second paragraph, rejection. However, in view of the above amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are in condition for allowance.

Claim 33 stands objected to for an informality. (See 4/3/09 Office Action, p. 2). Specifically, the Examiner states that claim 33 depends from a cancelled claim. Claim 33 has been amended to depend upon claim 31.

Claims 25 and 36 stand rejected under 35 U.S.C. §112, first paragraph, for failing to comply with the enablement requirement. (See 4/3/09 Office Action, p. 2). Specifically, the Examiner states that the disclosure of the present invention does not teach a first sensor element with four different magnetic flows. It is respectfully submitted that the Examiner appears to be misinterpreting the recitation of claims 25 and 36. The Examiner appears to consider the recitation “a first circular magnetic flow having the first direction” as being a first magnetic flow that is circular and a second magnetic flow that has the first direction while “a second circular magnetic flow having the second direction” as being a third magnetic flow that is circular and a fourth magnetic flow that has the second direction. (*i.e.*, “four different magnetic flows in the first sensor element” (See Id.)). However, the recitation “a first circular magnetic flow having the first direction” refers to a single magnetic flow in which the flow has a shape that is circular and in which the flow travels in the first direction. This same logic applies to the second circular magnetic flow as well for both in the recitation

in claim 36. The disclosure of the present invention fully provides enablement for a first sensor element having 1) a first magnetic flow that is circular with a first direction and 2) a second magnetic flow that is also circular with a second direction. (See Specification, Fig. 4).

Regarding the Examiner's query whether the magnetic flows of claims 25 and 36 are the same as the first and second flows of claims 2 and 29, claims 25 and 36 relate to a circular *magnetic* flow whereas claims 2 and 29 relate to a *current pulse* in a longitudinal direction. As is known to one skilled in the art, a current pulse in a longitudinal direction causes a magnetic flow in a circular direction according to the right-hand-rule as is evidenced in the present invention. (See Specification, p. 43; Figs. 34-35). However, the recitations of claims 2/29 and 25/36 relate to different aspects of an electromagnetic relationship.

Claims 44, 49, and 55-57 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. (See 4/3/09 Office Action, p. 3).

Regarding claim 49, the Examiner states that the term "significant longer" is a relative phrase. Claim 49 has been amended to remove the relative portion and now recites "wherein a first duration of the first current pulse is longer than a second duration of the second current pulse."

Regarding claims 44 and 55, the Examiner states that these claims have terms that lack proper antecedent basis. Claims 44 and 55 have been cancelled and it is respectfully submitted that the rejection for these claims is moot.

Claims 1, 3-4, 6-7, 9-17, 20-21, 24-32, 35, 37, and 38 stand rejected under 35 U.S.C. § 102(b) as being anticipated by PCT Publication Application No. WO 99/56099 to May et al. (hereinafter referred to as the '099 Patent).

Claim 1 has been amended to incorporate the subject matter of cancelled claims 2, 5, 22, and 23. As indicated by the Examiner, claim 23 is allowable if written in independent form. Thus, it is respectfully submitted that claim 1 is now allowable and the Examiner

should withdraw the 35 U.S.C. § 102(b) rejection for this claim. Because claims 3-4, 6-7, 9-17, 20-21, and 24-28 depend from and, therefore, include the limitations of claim 1, it is respectfully submitted that these claims are also allowable.

Claim 29 has been amended to incorporate the subject matter of cancelled claim 36. The Examiner does not indicate that the subject matter of claim 36 is allowable as no art rejection was deemed appropriate. However, it is respectfully submitted that the '099 Patent does not disclose the subject matter of cancelled claim 36. Thus, because claim 29 incorporates the subject matter of cancelled claim 36, it is respectfully submitted that this claim is allowable and the Examiner should withdraw the 35 U.S.C. § 102(b) rejection for this claim. Because claims 30-31, 32, 35, 37, and 38 depend from and, therefore, include the limitations of claim 1, it is respectfully submitted that these claims are also allowable.

Claim 39 stands rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,220,105 to Cripe. (See 4/3/09 Office Action, p. 5).

Claim 39 has been amended to incorporate the subject matter of cancelled claims 40 and 41. As indicated by the Examiner, claim 41 is allowable if written in independent form. Thus, it is respectfully submitted that claim 39 is now allowable and the Examiner should withdraw the 35 U.S.C. § 102(b) rejection for this claim.

Claims 47 and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cripe. (See 4/3/09 Office Action, p. 6).

As discussed above, claim 39 has been amended to incorporate allowable subject matter of cancelled claim 41. Because claims 47 and 48 depend from and, therefore, include the limitations of claim 39, it is respectfully submitted that these claims are also allowable.

New claim 68 recites substantially similar limitations as claim 39 prior to its current amendment and incorporates the subject matter of cancelled claims 40 and 42. As indicated by the Examiner, claim 42 is allowable if written in independent form. Thus, it is respectfully submitted that claim 68 is allowable.

New claim 69 recites substantially similar limitations as claim 39 prior to its current amendment and incorporates the subject matter of cancelled claim 43. As indicated by the Examiner, claim 43 is allowable if written in independent form. Thus, it is respectfully submitted that claim 69 is allowable. Because claims 70-74 depend from and, therefore, include the limitations of claim 69, it is respectfully submitted that these claims are also allowable.

CONCLUSION

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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